

## AMENDMENTS TO THE CLAIMS

Cancel claims 16 and 45 without prejudice, and amend the claims as shown below.

1. **(Canceled)**

2. **(Currently Amended)** The method ~~artificial tissue~~ of claim 23 further comprising epithelial cells from the same species as the connective tissue cells and the endothelial cells.

3. (Original) The method ~~artificial tissue~~ of claim 2 wherein the epithelial cells form a multilayered epithelium.

4. **(Currently Amended)** The method ~~artificial tissue~~ of claims 2 or 23 wherein the cells are mammalian cells.

5. **(Currently Amended)** The method ~~artificial tissue~~ of claim 4 wherein the mammal is selected from the group consisting of primate, mouse, pig, cow, cat, goat, rabbit, rat, guinea pig, hamster, horse, and sheep.

6. **(Currently Amended)** The method ~~artificial tissue~~ of claim 4 wherein the mammal is a human.

7. **(Canceled)**

8. **(Canceled)**

9. **(Currently Amended)** The method ~~artificial tissue~~ of claims 2 or 23 wherein the support matrix comprises collagen.

10. **(Currently Amended)** The method ~~artificial tissue~~ of claim 44 wherein the microvascular endothelial cells comprise primary human adult lung microvascular cells.

11. **(Currently Amended)** The method ~~artificial tissue~~ of claims 2 or 23 wherein the connective tissue cells comprise primary human adult dermal fibroblasts.

12. (Original) The method ~~artificial tissue~~ of claims 2 or 3 wherein the epithelial cells comprise primary human adult keratinocytes.

13. **(Currently Amended)** The method ~~artificial tissue~~ of claim 23, wherein the support matrix comprises collagen, the endothelial cells comprise primary human adult lung microvascular cells, and the connective tissue cells comprise primary human dermal fibroblasts.

14. **(Currently Amended)** The method ~~artificial tissue~~ of claim 13, wherein the artificial tissue additionally comprises primary human keratinocytes.

15. **(Currently Amended)** The method ~~artificial tissue~~ of claims 2 or 23 wherein the artificial tissue produces one or more compounds selected from the group consisting of laminin, fibronectin, collagen I, collagen III, hyaluronic acid, VEGF 145, VEGF 121, bFGF, IL-8, Syndecan-1, CXCR-1, CXCR-2, a mannose-containing protein, an acetylglucosamine-containing protein, PECAM-1, alpha-SMA, MMP-2, a growth factor receptor, plasminogen activator, mSRA, and CD68.

16. **(Canceled)**

17. **(Canceled)**

18. **(Currently Amended)** The method ~~artificial tissue~~ of claims 2 or 23 wherein the artificial tissue produces one or more periendothelial ~~perioendothelial~~ cells.

19. **(Currently Amended)** The method ~~artificial tissue~~ of claims 2 or 23 wherein the artificial tissue produces an extracellular matrix.

20. **(Currently Amended)** The method ~~artificial tissue~~ of claims 2 or 23 wherein the artificial tissue is self-maintained.

21. **(Canceled)**

22. **(Canceled)**

23. **(Currently Amended)** A method of producing an ~~An~~ artificial tissue, said ~~produced by a~~ method comprising: mixing together a support matrix and connective tissue cells to form a support matrix-connective tissue mixture and forming an original a culture comprising two layers of support matrix-connective tissue mixture separated by a layer of endothelial cells, wherein said endothelial cells contact inner surfaces of the support matrix-connective tissue mixture layers, and wherein the cells are from the same species, whereby said original culture produces an artificial tissue comprising one or more microvessels ~~produced therein, wherein said one or more microvessels produce~~ and one or more mononuclear leukocytes.

24. **(Canceled)**

25. **(Currently Amended)** The method ~~artificial tissue~~ of claims 2 or 23 wherein the artificial tissue is maintained in vitro.

26. **(Currently Amended)** The method ~~artificial tissue~~ of claims 2 or 23 wherein the artificial tissue is a composition suitable for tissue grafting.

27-42. **(Canceled)**

43. **(Currently Amended)** The method ~~artificial tissue~~ of claims 2 or 23 wherein the support matrix comprises only natural components.

44. **(Currently Amended)** The method ~~artificial tissue~~ of claims 2 or 23 wherein the endothelial cells comprise microvascular endothelial cells.

45. **(Canceled)**

46. **(New)** The method of claims 2 or 23 wherein microvessels and mononuclear leukocytes are not present in the original culture, but are formed during culturing.

47. **(New)** An artificial tissue produced by the method of claim 23.

48. **(New)** An artificial tissue produced by the method of claim 46.